

FIGURE 1A

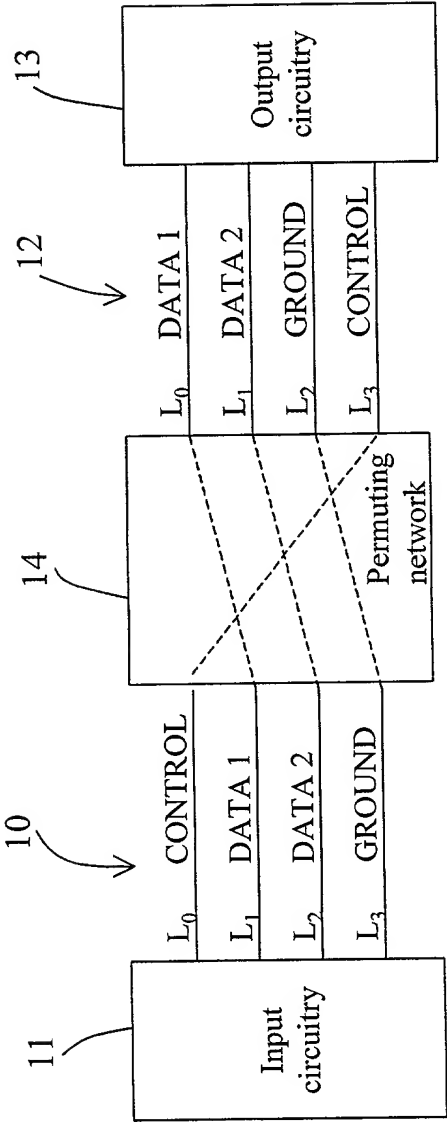


FIGURE 1A

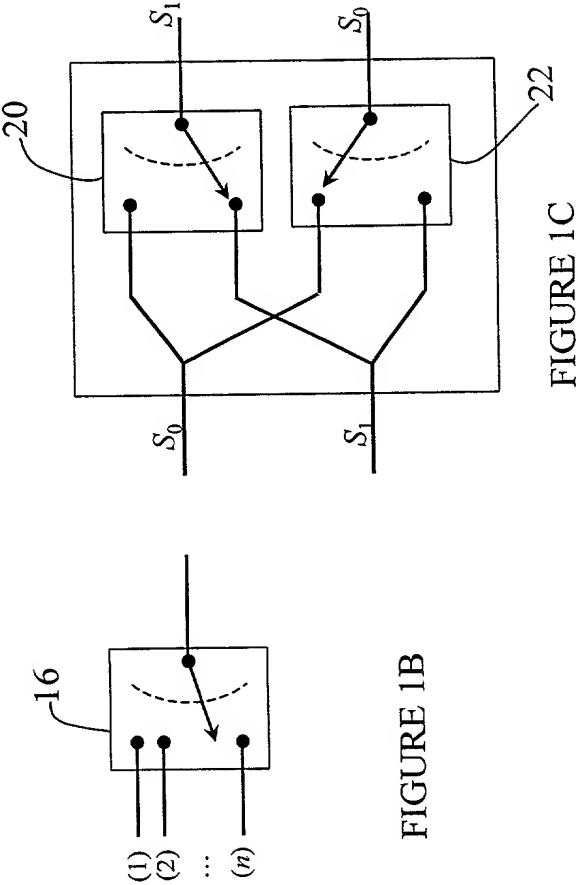


FIGURE 1B

FIGURE 1C

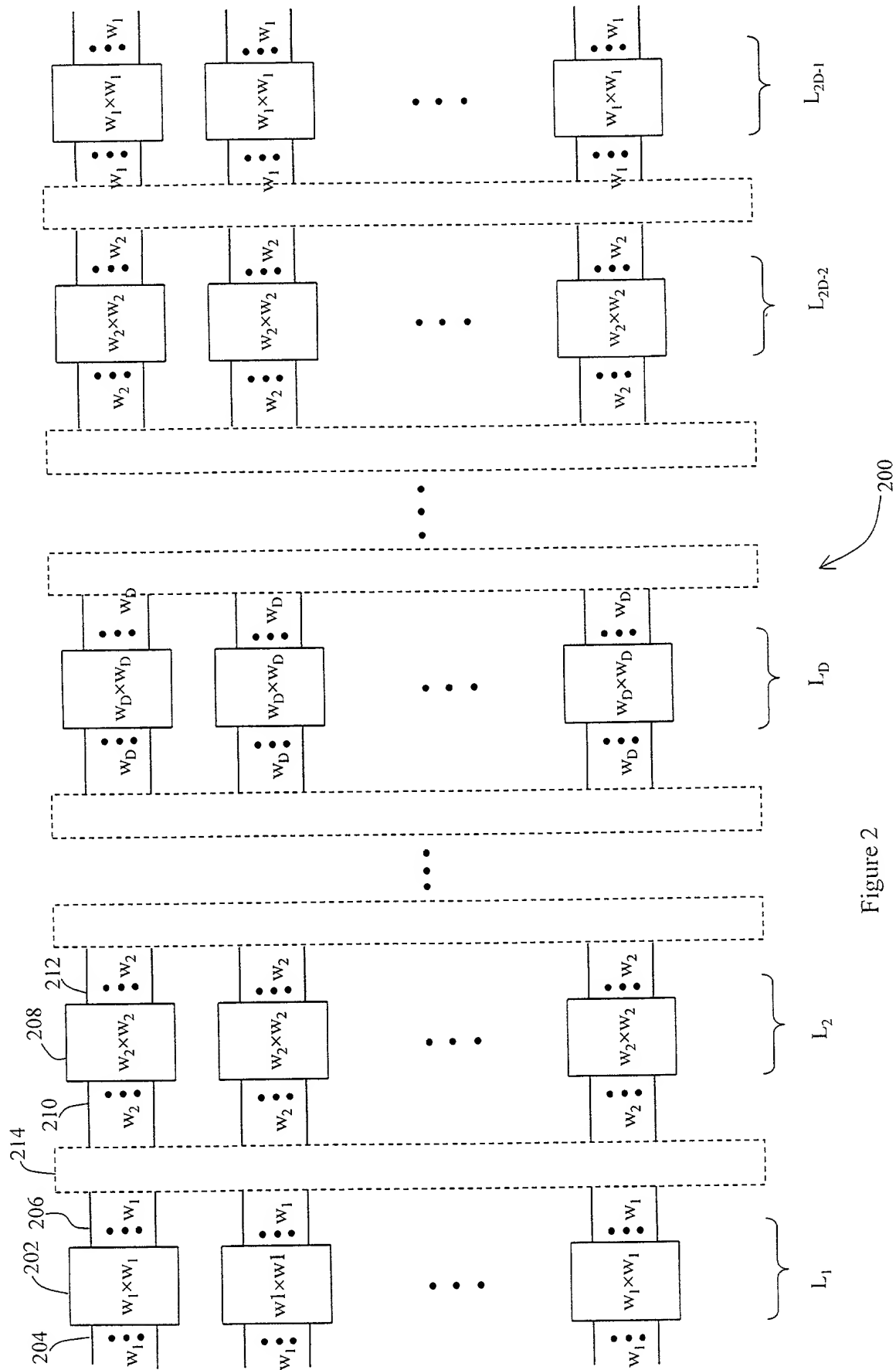


Figure 2

FIGURE 3A

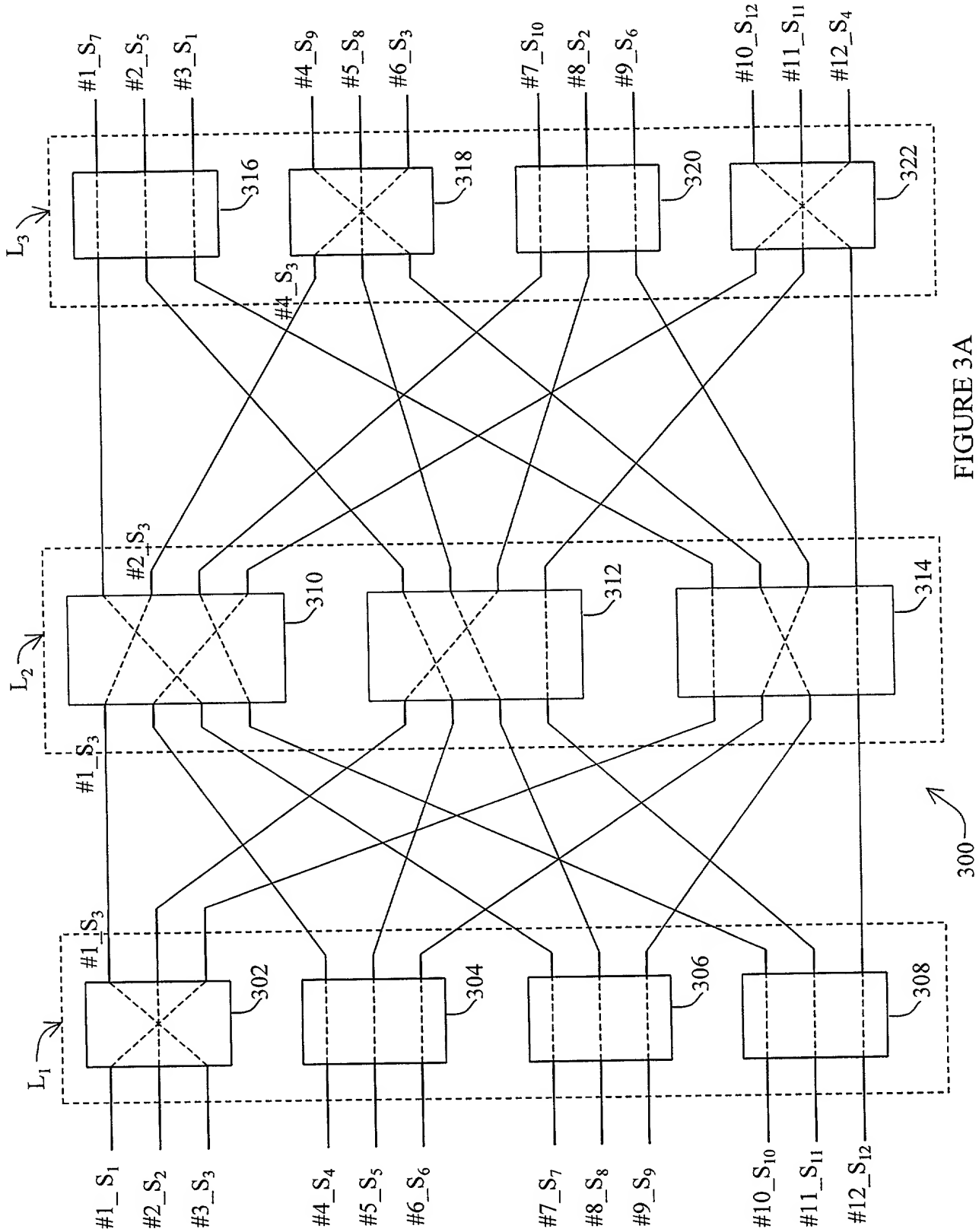


FIGURE 3A

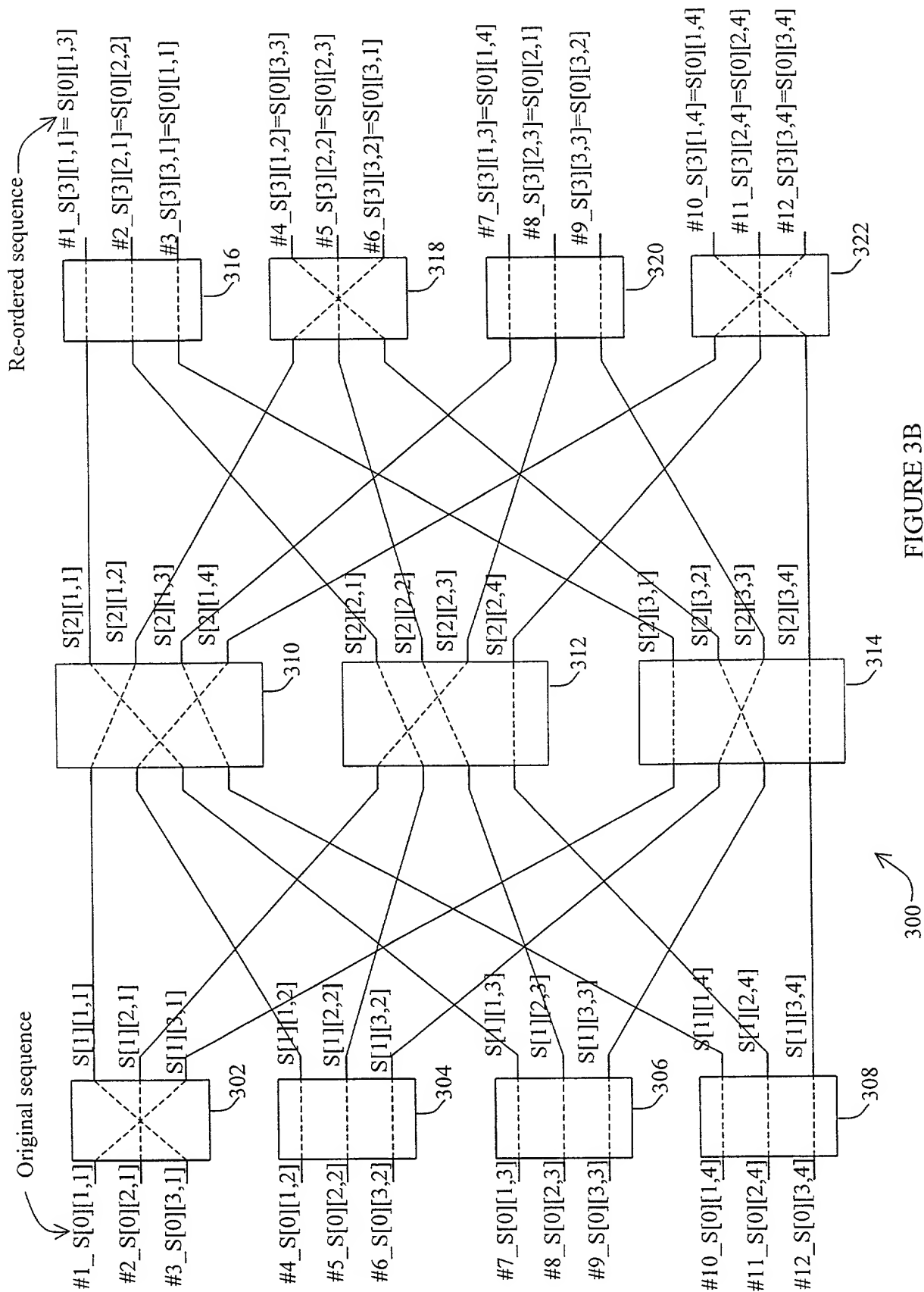


FIGURE 3B

MAPPING GOAL

Input #1 : [1,1] → Output #1 : [3,1]
Input #2 : [2,1] → Output #2 : [2,3]
Input #3 : [3,1] → Output #3 : [3,2]

Input #4 : [1,2] → Output #4 : [3,4]
Input #5 : [2,2] → Output #5 : [2,1]
Input #6 : [3,2] → Output #6 : [3,3]

Input #7 : [1,3] → Output #7 : [1,1]
Input #8 : [2,3] → Output #8 : [2,2]
Input #9 : [3,3] → Output #9 : [1,2]

Input #10 : [1,4] → Output #10 : [1,3]
Input #11 : [2,4] → Output #11 : [2,4]
Input #12 : [3,4] → Output #12 : [1,4]

SWITCH SEQUENCE

[1,1] → [3,1] → [3,1] → [3,1] → [3,1]
[2,1] → [2,1] → [2,1] → [2,3] → [2,3]
[3,1] → [1,1] → [1,1] → [1,2] → [3,2]

[1,2] → [1,2] → [1,2] → [1,4] → [3,4]
[2,2] → [2,2] → [2,2] → [2,1] → [2,1]
[3,2] → [3,2] → [3,2] → [3,3] → [3,3]

[1,3] → [1,3] → [1,3] → [1,1] → [1,1]
[2,3] → [2,3] → [2,3] → [2,2] → [2,2]
[3,3] → [3,3] → [3,3] → [3,2] → [1,2]

[1,4] → [1,4] → [1,4] → [1,3] → [1,3]
[2,4] → [2,4] → [2,4] → [2,4] → [2,4]
[3,4] → [3,4] → [3,4] → [3,4] → [1,4]

L₁: Exchange first coordinate
L₂: Exchange second coordinate
L₃: Exchange first coordinate

Figure 4A

Figure 4B

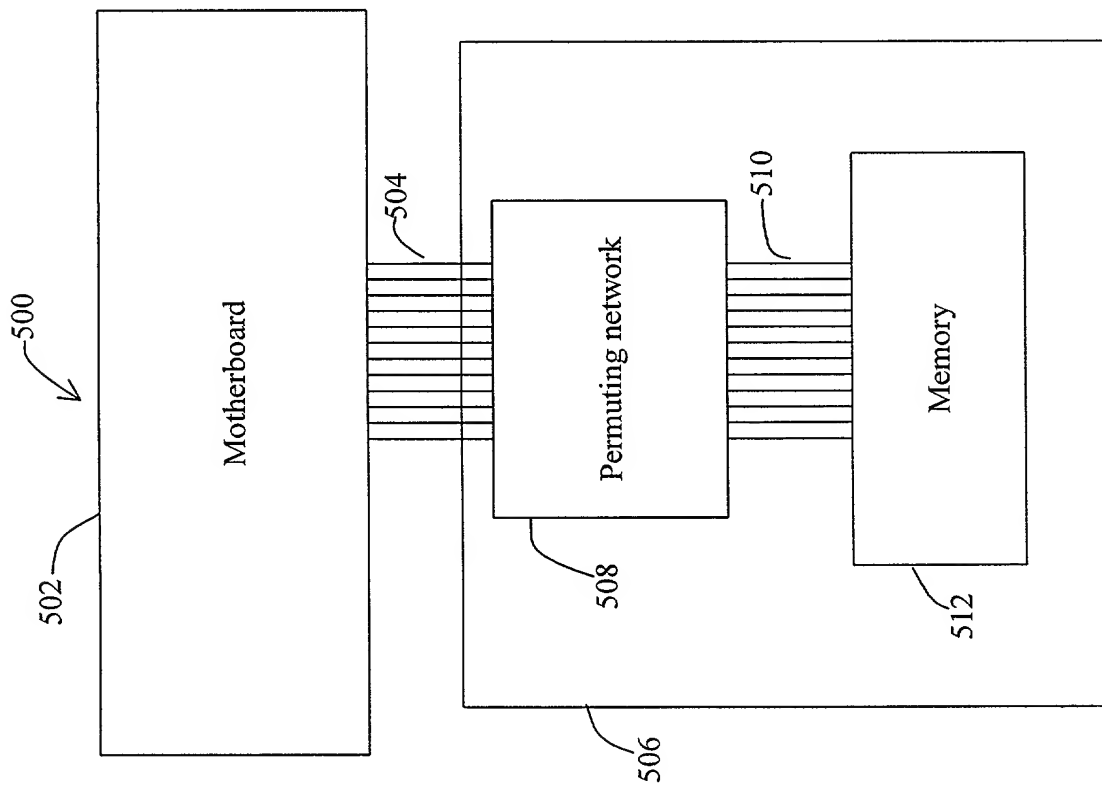


FIGURE 5A

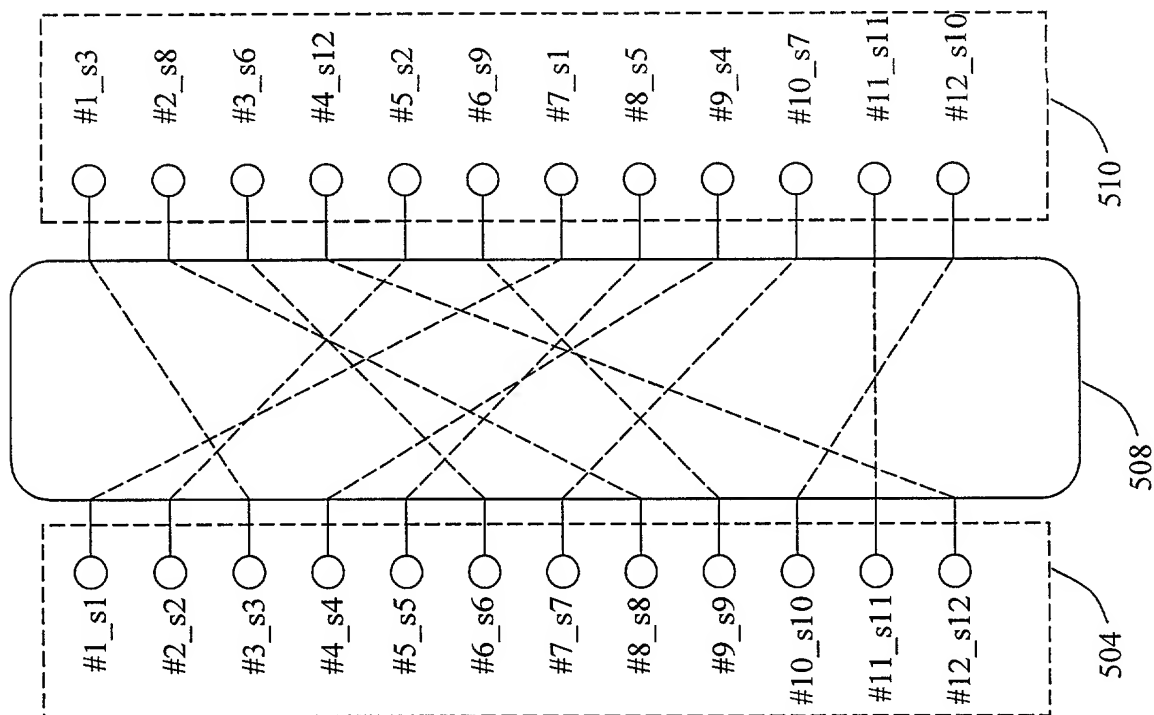


FIGURE 5B

FIGURE 6

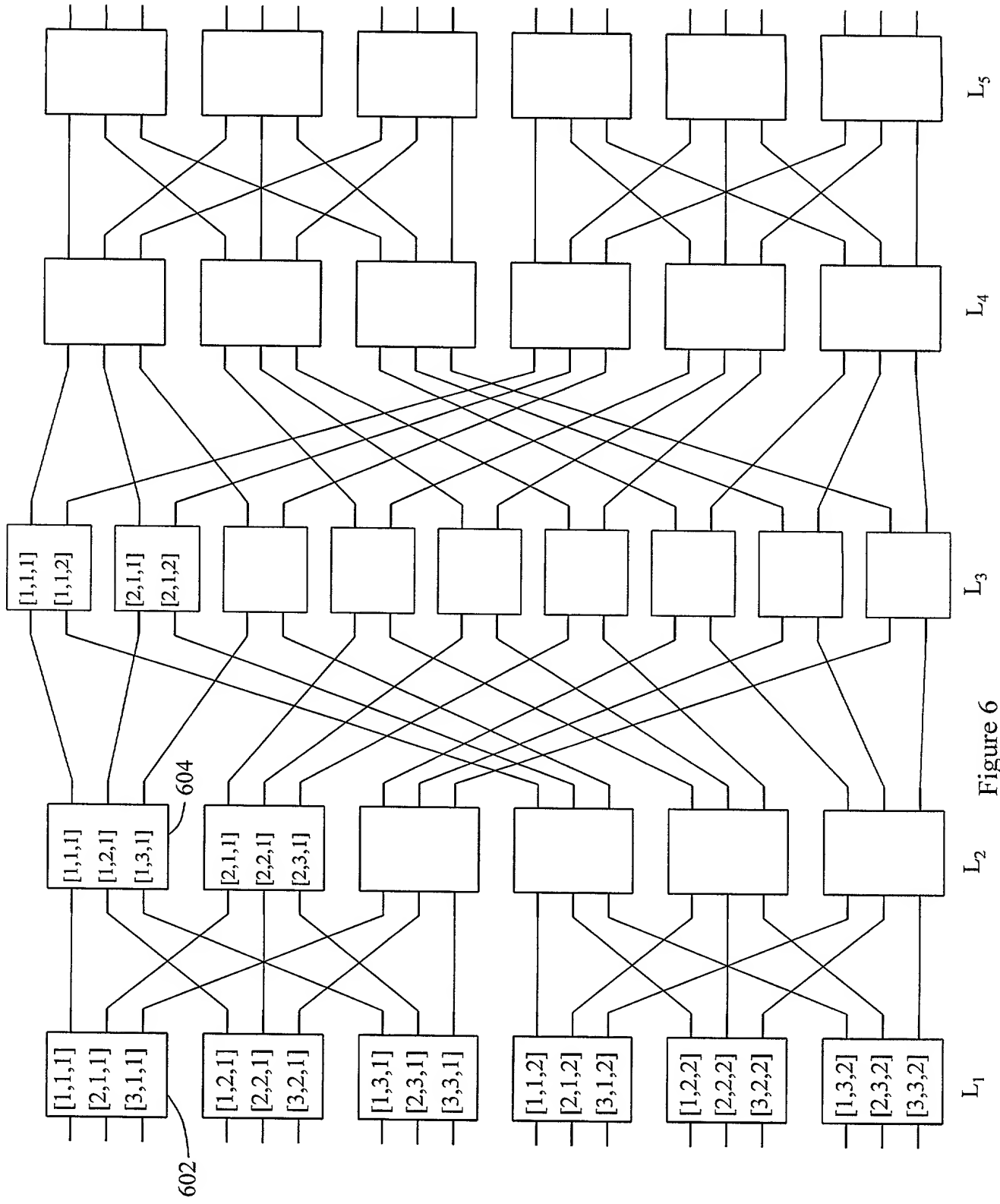


Figure 6